Supporting Material

Two barriers or not? Dynamic force spectroscopy on the integrin $\alpha_7\beta_1$ invasin complex

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Series id		v_{piezo} [µm/s]	$\frac{\overline{v}_{bfp}}{v_{piezo}}$ [%]	f_{im} [pN]	r_{16} [nN/s]	r_{84} [nN/s]	$\dot{f}_{16}$ [pN]	$\dot{f}_{84}$ [pN]
1		0.24	96	6	0.017	0.018	8.9	16
2	a	0.72	90	6	0.021	0.026	6.2	9.4
	b	0.36	92	6	0.022	0.027	11	13
3		0.72	90	9	0.046	0.052	14	16
4	a	0.84	86	13	0.097	0.13	17	20
	b	1.7	90	9	0.11	0.12	14	16
5	a	1.4	92	11	0.19	0.21	22	26
	b	2.9	93	8	0.20	0.21	21	26
6	a	2.2	87	10	0.24	0.29	24	27
	b	1.7	89	17	0.28	0.31	28	32
7		2.3	90	14	0.37	0.43	37	42
8	a	1.8	83	22	0.46	0.57	33	41
	b	4.1	90	16	0.50	0.62	40	47
9	a	2.8	85	31	0.72	0.90	40	46
	b	5.0	85	18	0.74	0.89	41	50
10		7.8	90	16	1.2	1.3	47	62
11		5.5	83	32	1.4	1.7	50	56
12		7.2	87	38	1.2	2.3	59	64
13		8.4	82	44	3.0	3.6	62	68
14		10.8	85	58	4.8	5.6	65	75

Table S1: Statistical uncertainties and parameters relevant for filtering of measurements. Series have been sorted according to increasing loading rate. Series labeled with identical numbers, but different characters, have almost the same force loading rates, but different spring constants. All parameters were calculated after a preprocessing routine that filters out events with abnormal pulling velocities. Abbreviations: v_{piezo} piezo velocity, $\overline{v}_{bfp}$ average speed of probe bead, and f_{im} median impingement force, r_{16} 16% fractile and r_{84} 84% fractile of measured force loading rates, $\dot{f}_{16}$ 16% fractile and $\dot{f}_{84}$ 84% fractile of median yield forces as determined with 2500 bootstrap iterations (cf. Materials and Methods in the main text).